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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,222	11/28/2006	Mitsuhiro Nishina	050203-0150	3412
31824 7590 10/31/2007 MCDERMOTT WILL & EMERY LLP 18191 VON KARMAN AVE. SUITE 500 IRVINE, CA 92612-7108			EXAMINER TRAN, BINH Q	
			ART UNIT 3748	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,222

Applicant(s)

NISHINA ET AL.

Examiner

BINH Q. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 9-17 is/are rejected.
- 7) ☒ Claim(s) 2-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/26/06; 09/06/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, and 9-17 are rejected under 35 U.S.C. 102 (b) as being anticipated by Tarabulski et al. (Tarabulski) (Patent Number 6,063,350).

Regarding claims 1, 15, and 17, Tarabulski discloses a exhaust gas purifying apparatus for an engine (10), comprising: an addition apparatus (e.g. 30-33) that adds a reducing agent of NO_x to an exhaust gas from the engine; a storage tank (30) that stores the reducing agent of NO_x

that is added to the exhaust gas by the addition apparatus or a precursor thereof in a state of an aqueous solution; a concentration sensor (152) that detects a concentration of the reducing agent or the precursor contained in the aqueous solution of the reducing agent or the precursor that is stored in the storage tank; and a controller (40) that generates an operation command to a predetermined object for being controlled related to purifying of the exhaust gas on the basis of the detected concentration which is the concentration of the reducing agent or the precursor detected by the concentration sensor (e.g. See col. 7, lines 16-42), wherein the controller determines whether or not the aqueous solution of the reducing agent or the precursor in the storage tank is in a stationary state and, at a stationary time when it is determined to be in a stationary state, permits sensing of the concentration by the concentration sensor, while at a shaking time other than the stationary time, prohibits the sensing of the concentration by the concentration sensor, and wherein the concentration sensor detects the concentration of the reducing agent or the precursor only at the stationary time (e.g. See col. 8, lines 28-67; col. 9, lines 1-52).

Regarding claim 9, Tarabulski further discloses that wherein the controller determines that the aqueous solution of the reducing agent or the precursor is in a stationary state at the time of the start of the engine (e.g. See col. 8, lines 28-67; col. 9, lines 1-52).

Regarding claim 10, Tarabulski further discloses that wherein the controller controls an amount of addition of the reducing agent by the addition apparatus on the basis of the detected concentration (e.g. See col. 8, lines 28-67; col. 9, lines 1-52).

Regarding claim 11, Tarabulski further discloses that wherein the concentration sensor comprises a sensor element section disposed in the storage tank and a circuit section connected

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to the sensor element section, wherein the sensor element section is configured to include a heater (156) and a temperature-sensitive body (143) having a property of changing an electrical characteristic value depending on a temperature, said temperature-sensitive body being directly or indirectly in contact with the aqueous solution of the reducing agent or the precursor in the storage tank, and being heated by this heater; and wherein the circuit section drives the heater, detects the electrical characteristic value of the heated temperature-sensitive body, and detects the concentration of the reducing agent or the precursor on the basis of the detected electrical characteristic value (e.g. See col. 7, lines 16-42).

Regarding claim 12, Tarabulski further discloses that wherein the controller generates a determination signal indicating whether or not a predetermined amount or more of the aqueous solution of the reducing agent or the precursor is left in the storage tank on the basis of the electrical characteristic value detected by the circuit section.

Regarding claim 13, Tarabulski further discloses that wherein the reducing agent of NO_x is ammonia (e.g. See col. 7, lines 16-42).

Regarding claim 14, Tarabulski further discloses that wherein the storage tank stores urea water serving as the aqueous solution of the precursor (e.g. See col. 7, lines 16-42).

Regarding claim 16, Tarabulski further discloses that wherein the command generating means generates an operation command for increasing or decreasing an amount of addition of the reducing agent to the addition means on the basis of the detected concentration (e.g. See col. 8, lines 28-67; col. 9, lines 1-52).

Allowable Subject Matter

Claims 2-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since allowable subject matter has been indicated, applicant is encouraged to submit **Final Formal Drawings (If Needed)** in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents:

Emmerling et al. (Pat. No. 6119448), Huber et al. (Pat. No. 7017335), Weigl (Pat. No. 6519935), Funk et al. (Pat. No. 7065958), and Kosaka (Pat. No. 67181337) all disclose an exhaust gas purification for use with an internal combustion engine.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT
October 28, 2007



Binh Q. Tran
Patent Examiner
Art Unit 3748